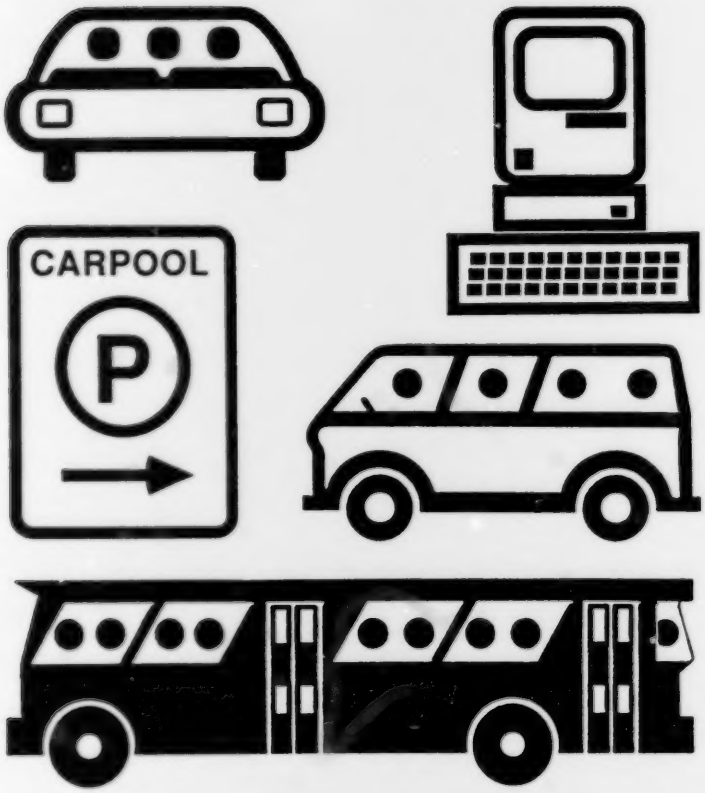
Ontario

Ministry of
Transportation and
Communications

Ministry
of
Energy

Share-A-Ride Rideshare Matching System (SARRMS)



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THE SYSTEM

SARRMS is an on-line, interactive rideshare matching system specifically designed for Canadian applications.

SARRMS produces up-to-the-minute, personalized matching information for rideshare applicants. Individual phone-in information requests can be processed while the caller is on the telephone. Rideshare applicants receive a matchlist containing information on other applicants wanting to carpool, vanpool operators, transit and carpool parking lots.

SARRMS also produces matchlists for vanpool operators. It supplies information on any of the data bases within the system and selectively re-matches, updates, purges or prints groups of applicants.

SARRMS operates on IBM microcomputers. The system is capable of handling a large number of requests with a high degree of accuracy and speed.

SARRMS is flexible enough to be used by employers, municipalities and ridesharing agencies to provide rideshare matching service. It satisfies the needs of users, managers and potential poolers. The operator requires only limited knowledge of computers; however, it is desirable that the operator understands the principles of ridesharing in order to interact with the system.

FEATURES

SARRMS is unique in Canada. The system has been designed to be efficient, economical and user friendly. The following are some of its features.

General
- Menu driven
- On-line
- Interactive
- Option-filled
- Protects confidentiality of applicants
- Quickly moves from one subsystem to another using Automenu
- Operates on IBM

Entry
- On-line entry
- Designates a specified batch file into which applicants are saved, allowing for processing of specific applicants at one time (all applicants at one employer can be processed together)
- All applicants in one data base
- Checks that an applicant is not already in the system
- Conducts verification checks on input information
- Automatic entry of information by the system
- Automatic entry of zone numbers and home and work grid locations to the nearest 0.1 km by using geocoded postal codes

Processing
- Incorporates home and work locations and work time into the matching process
- Can change matching parameters on-line to produce the best matching results for an applicant
- On-line matching of individual requests
- Batch processing of a large number of requests
- Can save reports or results to a file before printing or can process and print at the same time
- Creates a purge mailer letter or follow-up matchlist, which is sent out to applicants after they have been in the system a specified length of time

Output
- Can process individual phone-in information requests while the caller is on the telephone
- Produces a personalized applicant matchlist
- Can print selected segments of a large applicant print file
- Produces a matchlist for vanpool operators
- Produces statistical summaries and reports
- Produces output in English or French
- Can direct output to most types of printers
- Tracks employer activities

Purge
- Purges dated information from data files

Backup
- Version 2.0, for internal hard disks, backs up files onto diskettes.
- Version 1.0, for Tallgrass external hard disks, backs up files onto tape.

HARDWARE REQUIREMENTS

SARRMS has been designed to operate on IBM microcomputers. The system operates on an IBM XT, AT or a PC with an external hard disk (Tallgrass).

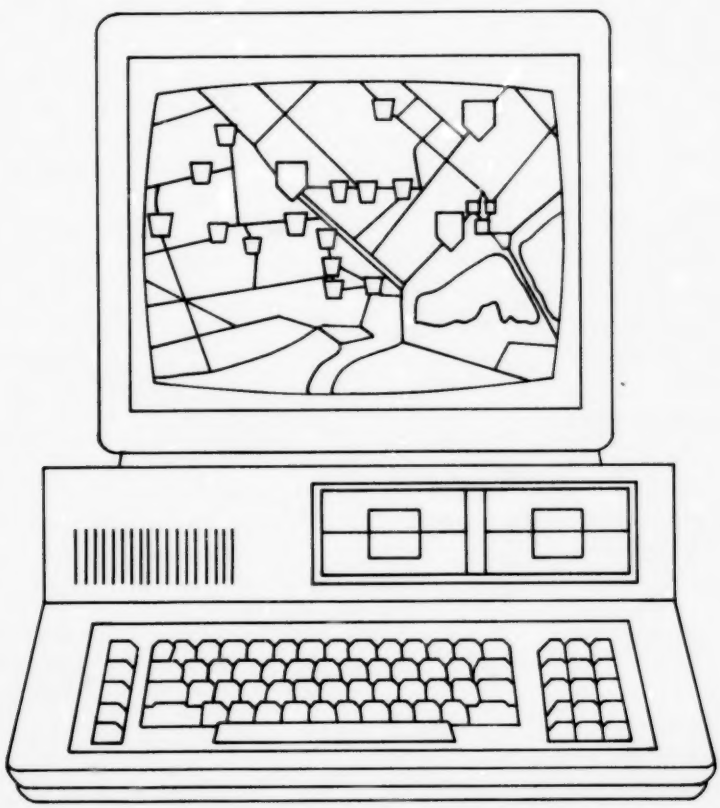
The following hardware is required:

- IBM system unit (with or without a graphics or colour card)
- IBM monitor
- 256 KB RAM (minimum)
- 5 MB hard disk storage (internal or external)
- 8087 co-processor
- Fast, good quality printer

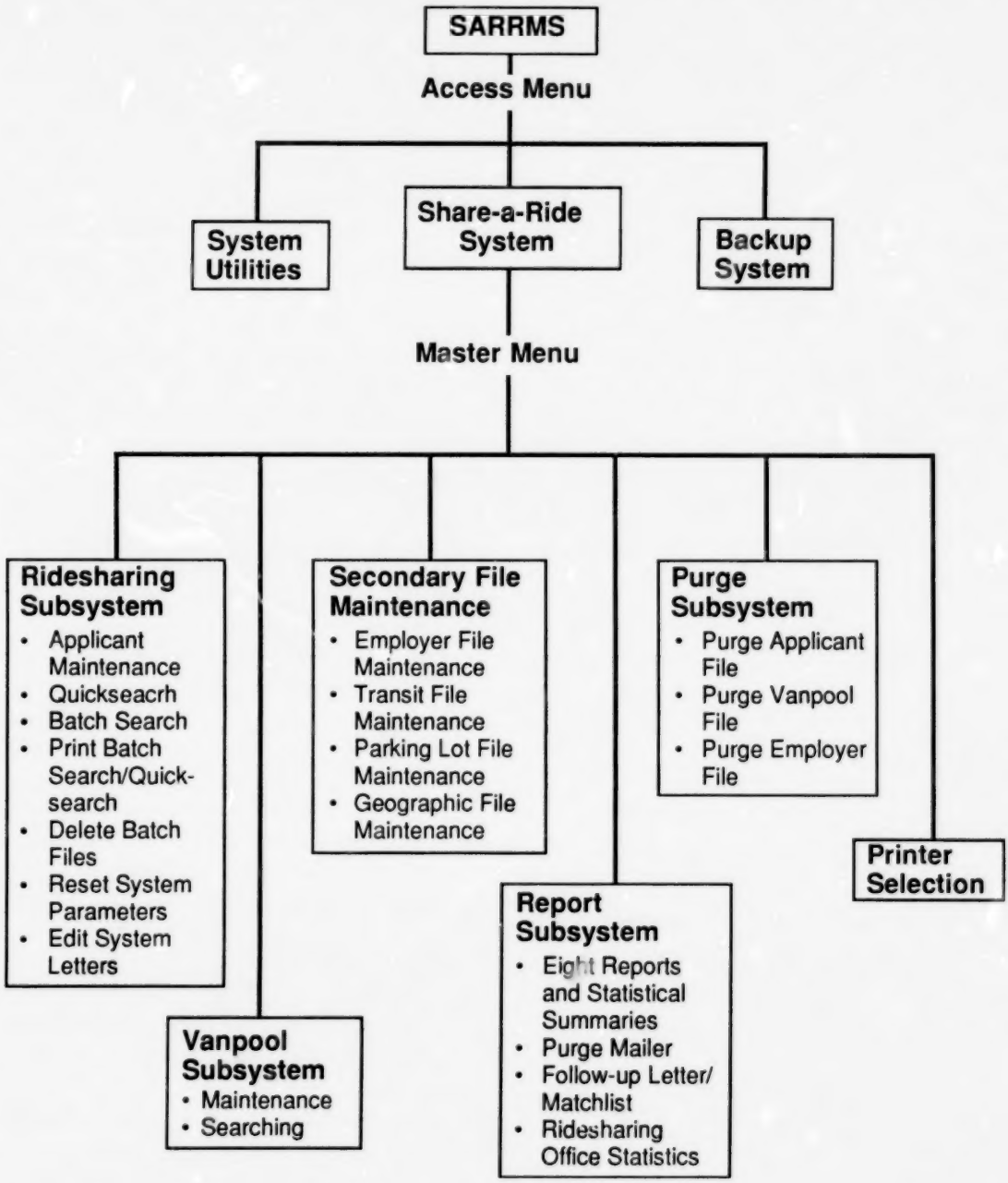
The system has been shown to operate on most IBM-compatible computers as well.

SOFTWARE

SARRMS is a completely self-contained software package. The principal program language is MS-FORTRAN. Some routines were written in Assembler. The input files are managed by BTRIEVE (a record manager system). SARRMS can operate on any IBM with an internal hard disk or a Tallgrass external hard disk. The load modules are supplied on 6 system diskettes (1.8 MB of storage is required). SARRMS contains five basic modules. This modular structure provides flexibility to the system in terms of changes and enhancements.



SYSTEM STRUCTURE OVERVIEW



SARRMS PROGRAMS

Rideshare Subsystem

Applicant Maintenance
This program handles the applicant file. The following are program features:

- to designate unique batch files into which applicants are saved for matching
- to add and change applicant records on-line
- automatic entry of identification code, home and work grid location, employer information, date of last contact
- to check for duplicates
- to conduct verification checks
- to find a record
- to save a record for matching in Batch Search
- to update a record without saving it for matching
- to hold a record with incomplete information
- to delete a record
- to conduct a quicksearch

There is no maximum number of records; however, storage space and processing time may limit the number of records that are practical (10 000 applicants can be handled without difficulty).

Quicksearch
This program is used to conduct an immediate search for an individual applicant. The program produces a matchlist or a quicksearch result which can be displayed to be read over the telephone or printed.

Batch Search
This program is used to search and match for any number of applicants that have been saved. It processes any batch file that has been designated in Applicant Maintenance. The purge mailer and follow-up letter/matchlist are processed in this program as well.

Print Batch Search/Quicksearch
This program prints out Batch Search and Quicksearch Results/Matchlists. A specific segment of the print file can be selected for printing.

Delete Batch Files
This program is used to delete any unwanted batch files.

Reset System Parameters
This program is used to change system defaults and search parameters such as search area, time and number of poolers sought.

Edit System Letters
The program handles all letters within the system. Typical covering letters within the system include the following:

- a standard letter for matchlists
- a letter for follow-up matchlists
- a letter for the purge mailer
- a letter for vanpool operators

The program can add, change or delete covering letters and the "no match" message. The program is also used to input or change printer codes and compressions.

Vanpool Subsystem

This program is used to handle the vanpool operator file and conduct a search and produce a matchlist for an

individual operator. This matchlist can be used by vanpool operators to identify possible riders for their vanpool, to identify other vanpool operators serving their areas and to identify carpool parking lots that could be used for pickups. Program features include

- adding, changing and finding vanpool operator information;
- saving or deleting a record;
- searching and printing of a matchlist.

The maximum number of records for this file is 9999.

Secondary File Maintenance

Employer Maintenance File
This program handles the employer information which appears on applicant and vanpool operator records. Standard functions such as add, change, find, save and delete are available. The maximum number of records for this file is 9999.

Transit File Maintenance
This program handles the transit operator information and their service area. The transit operator name and information phone number appear on the matchlist. Standard functions such as add, change, find, save and delete are available. The maximum number of records for this file is 9999.

Parking Lot File Maintenance
This program handles the parking lot information which appears on the matchlist. Standard functions are available. There is no maximum size for the file.

Geograph File
This program handles the geocoded postal code information. The file contains postal codes and their corresponding grid locations and zone numbers. The grid locations are used to do matching between applicants. The zone system is used to describe the vanpool operator and transit operator service areas. Standard functions are available. There is no maximum size for this file.

Report Subsystem

SARRMS produces all reports in English or French. The information for many reports can be selected and sorted.

Employer Reports
This report is a summary of a specific employer's information including its data, employee applicant list and a statistical summary. It is used by the employer as an information source for evaluating its ridesharing program and to provide on-site matching assistance. The information can be sorted in several different ways.

Employer Mailing Labels
This program produces mailing labels of the participating employers.

Report on Applicants
This program is used to do an analysis of specific segments of the applicant file. It contains information on applicants and a statistical summary on the selected applicants.

Report on Employers
This report is used to provide an information list and statistical summary of participating employers

Vanpool Operator's Report
This report is used to provide an information list and statistical summary of vanpool operators.

Transit Operator's Report
This report is used as an information list of transit operators.

Carpool Parking Lot Report
This report is used as a list of all carpool parking lots.

Purge Mailer
This program produces a file of applicants who will receive a purge mailer letter in order for them to update their information. Applicants can be selected based on date of last contact or employer.

Follow-up Letter/Matchlist
This program produces a file of applicants who will receive a follow-up matchlist when processed in Batch Search.

Ridesharing Office Statistics
This program is used to document daily and month-to-date activities of the ridesharing office.

Applicants on Hold Report
This report is used to identify and list applicants who were put on hold when they were input.

Purge Subsystem

Purge Applicant File
This program purges applicants from the applicant file based on a selected range of dates of last contact.

Purge Vanpool File
This program purges vanpool operators from the vanpool operator file based on a selected range of dates of last contact.

Purge Employer File
This program purges employers from the employer file based on a selected range of dates of last contact.

Printer Selection

The printer choice can be selected from nearly any screen.

Backup System

The backup system on an internal hard disk has been designed to utilize DOS commands to back up data onto diskettes. Systems with Tallgrass external hard disks can utilize tape backup capabilities. All tape utilities are included.

Automenu

This feature is used to move quickly from one program to another.

System Utilities

These utilities include printing a sorted catalogue of files and displaying a summary of disk space.

SEARCH AND MATCH PROCESS

Matching Options

Batch Search
This program can be used to search and match individual requests or a large number of requests.

Quicksearch
This program is used to search and match applicants who need their information immediately. Quicksearch only requires the information critical to matching to produce quicksearch matching results.

Vanpool
The Vanpool Subsystem is used to search, match and produce matchlists for vanpool operators.

Matching Parameters

All matching is done on the basis of location. The matching parameters can be changed on-line for each run to produce the best results.

Applicant
- Area of search at the home end
- Area of search at the work end
- Weighting the relative importance of home and work distances
- Number of matches
- Arrival and departure time

Vanpool
- Zones served

Matchlists

Applicants always receive the most up-to-date matches because the system is on-line.

Applicant
The applicant matchlist includes
- a covering letter (letter can be addressed to either the home or work address);
- a message from the employer;
- a list of possible pooling partners who have similar commuting characteristics;
- a list of vanpool operators serving the applicant's home and work zone;
- a list of transit operators serving the applicant's commuting trip;
- a list of carpool parking lots based on commuting direction.

Vanpool Operator
Vanpool operator matchlists include
- a covering letter;
- a list of the home, work and commuting information of applicants who live and work in the service zones identified by the vanpool operator;
- a list of the trip origin and destinations of other vanpool operators;
- a list of convenient carpool parking lots.

Time

It usually takes less than one minute to do the search and match process for one applicant. Depending on the type of printer, the printing may take two to three minutes per matchlist.

Summary of Batch Search Results

The system produces a report which details the quality and number of matches for a specific search. It also identifies the number and names of people who do not receive matches.

Sample Matchlist

06 OCT 1986

CHARLES CAMERON
8 Chestnut Hills Road # 9
Near Maple & Ridge Parkway
Rowland N1N 1N7
Interested in pooling regularly
Will ride or drive
Currently drives alone

Home 563-7612 Work 789-5634
Works at Appin Limited
109 Industry Street
Near Highway 171 & Front
Melrose N2N 2N2
Works on fixed hours
From 08:00 AM To 04:00 PM

Please check that the above information is correct.
The following people live and work near you. The better matches are listed first.
****

VERA DOBSON
Home 563-4251 Work 789-4344
Interested in pooling regularly
Will ride or drive
Currently drives alone

Lives in your area
Within 1/2 km of your home
On Park Street
Maple & Ridge Parkway
Rowland N1N 1N5

Works on flexible hours, usually
From 08:00 AM to 04:00 PM
At Appin Limited
109 Industry Street
Highway 171 & Front
Melrose N2N 2N2

MEL MCSWEEN
Home 563-7899 Work 965-6777 x12
Interested in pooling occasionally
As a rider only
Currently uses public transit
Prefer non smokers

Lives to the east
Within 1 km of your home
On Maple Street
Elm & Ridge Parkway
Rowland N1N 1N1

Works on flexible hours, usually
From 08:00 AM to 04:30 PM
At Appin Limited
109 Industry Street
Highway 171 & Front
Melrose N2N 2N2

** VANPOOL OPERATORS IN YOUR AREA **********

BRUCE MURPHY
On Belmont Crescent
Near George & Simcoe
Rowland N3H 2N1
Home 563-4380
Work 789-5767 x45

Operates a 12 passenger maroon van
To Appin Limited
109 Industry Street
Highway 171 & Front
Melrose N2N 2N2
Arriving at 08:00 AM and leaving at 04:30 PM
Fares: $ 17.00 to $ 20.00/week
First two weeks of riding free

** FOR TRANSIT SERVICE INFORMATION CALL **********

MELROSE TRANSIT 789-4666

** LOCATION OF FREE CARPOOL PARKING LOTS IN YOUR AREA **********

HIGHWAY 171 & GREENBANK ROAD

ARDEN STEET & RIDGE PARKWAY

****

8610060002

OWNERSHIP

The Share-A-Ride Rideshare Matching System (SARRMS) was developed through the efforts of

Share-A-Ride
Transportation Energy Office
Transportation Technology and Energy Branch
Ministry of Transportation and Communications
(416) 235-5037

Transportation Systems Office
Computer Systems Branch
Ministry of Transportation and Communications
(416) 235-4537

John Gorham Consultants Limited
10 Price Street
Toronto, Ontario
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(416) 967-7299

ACQUISITION

SARRMS is owned by Share-A-Ride. SARRMS can operate on an IBM with an internal hard disk (Version 2.0) and with a Tallgrass external hard disk (Version 1.0). The SARRMS package contains the following items:

- SARRMS Operator's Manual
- list of supporting materials and data
- installing and starting instructions
- list of files on system and diskettes
- six system diskettes

Employers, municipalities, or agencies wanting to acquire SARRMS should contact

Share-A-Ride
Transportation Energy Management Program
Ministry of Transportation and Communications
Room 324, Central Building
1201 Wilson Avenue
Downsview Ontario
M3M 1J8
(416) 235-5037

Indicate which version of SARRMS is required and please forward to Share-A-Ride the number of diskettes needed to copy the system (six diskettes) and any additional data files.